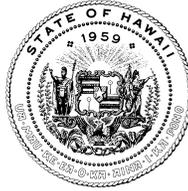


DAVID Y. IGE  
GOVERNOR



DOUGLAS MURDOCK  
CHIEF INFORMATION  
OFFICER

**OFFICE OF ENTERPRISE TECHNOLOGY SERVICES**

P.O. BOX 119, HONOLULU, HAWAII 96810-0119  
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ETS.HAWAII.GOV

December 22, 2022

The Honorable Ronald D. Kouchi  
President of the Senate  
and Members of the Senate  
Thirty-First State Legislature  
State Capitol, Room 409  
Honolulu, Hawai'i 96813

The Honorable Scott K. Saiki  
Speaker and Members of the  
House of Representatives  
Thirty-First State Legislature  
State Capitol, Room 431  
Honolulu, Hawai'i 96813

Aloha Senate President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation (IV&V) reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawai'i, Public Utilities Commission (PUC), Content and Document Management System Project.

In accordance with HRS section 93-16, this report may be viewed electronically at <http://ets.hawaii.gov> (see "Reports").

Sincerely,

  
Douglas Murdock (Dec 22, 2022 14:37 HST)

Douglas Murdock  
Chief Information Officer  
State of Hawai'i

Attachment



# Content and Document Management System (CDMS) Project

Hawaii Public Utilities Commission (PUC)

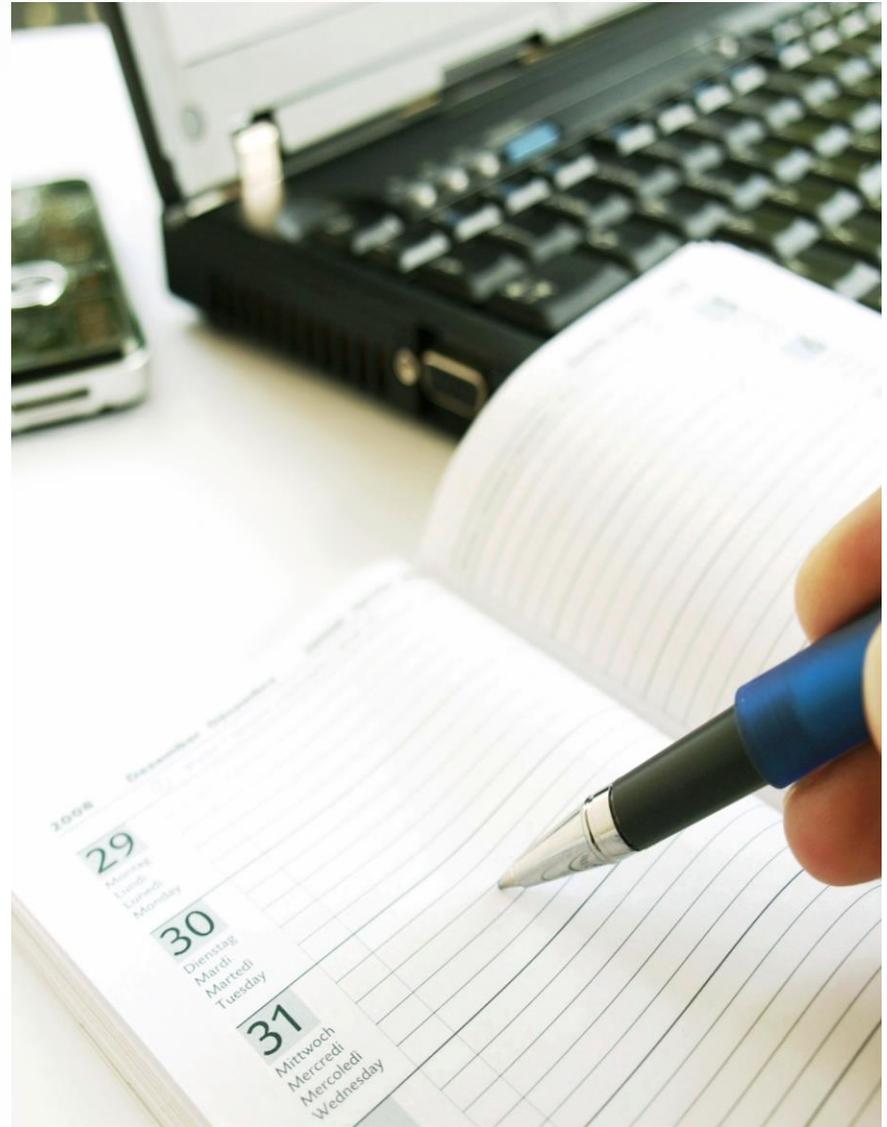
IV&V Monthly Status Report - FINAL  
For Reporting Period: **November 2022**

*Draft Submitted: 12/7/2022*

*Final Submitted: 12/22/2022*

# Overview

- Executive Summary
- IV&V Findings and Recommendations
- IV&V Preliminary Concerns
- IV&V Scope and Approach
- IV&V Engagement Status
- Appendices
  - A – IV&V Criticality Ratings
  - B – IV&V Inputs
  - C – Upcoming IV&V Activities



# Executive Summary

The SI reported completing all development and with the conclusion of Sprint 10, is planning a demo. The SI is preparing for System Testing slated for completion on December 23, 2022. The first of two rounds of User Acceptance Testing (UAT) is planned to begin January 9, 2023. The SI is currently seeking approval for the completion of the Project's Execution Phase. However, PUC remains unclear as to whether all requirements have been fulfilled and demonstrated to their satisfaction, and whether processes and designs are sufficiently optimized to meet their expectations. Therefore, PUC is currently unwilling to sign off on completion of the development / execution phase of the project. PUC requested an additional demo and intends to perform their own high-level quality assurance (QA) sessions to validate requirements have been developed before signing off. If PUC remains unsatisfied and the SI is unable to meet PUC's expectations, the Project may be delayed, and the budget could be negatively impacted.

IV&V remains concerned the PUC PM and Technical lead could be stretched beyond their capacity which could create some delays. For example, some project deliverables submitted in October have yet been approved. IV&V and PUC remain concerned that procurement challenges could delay the onboarding the new payment processing vendor. If this is delayed, the project go-live could be delayed and the project budget could be negatively impacted.



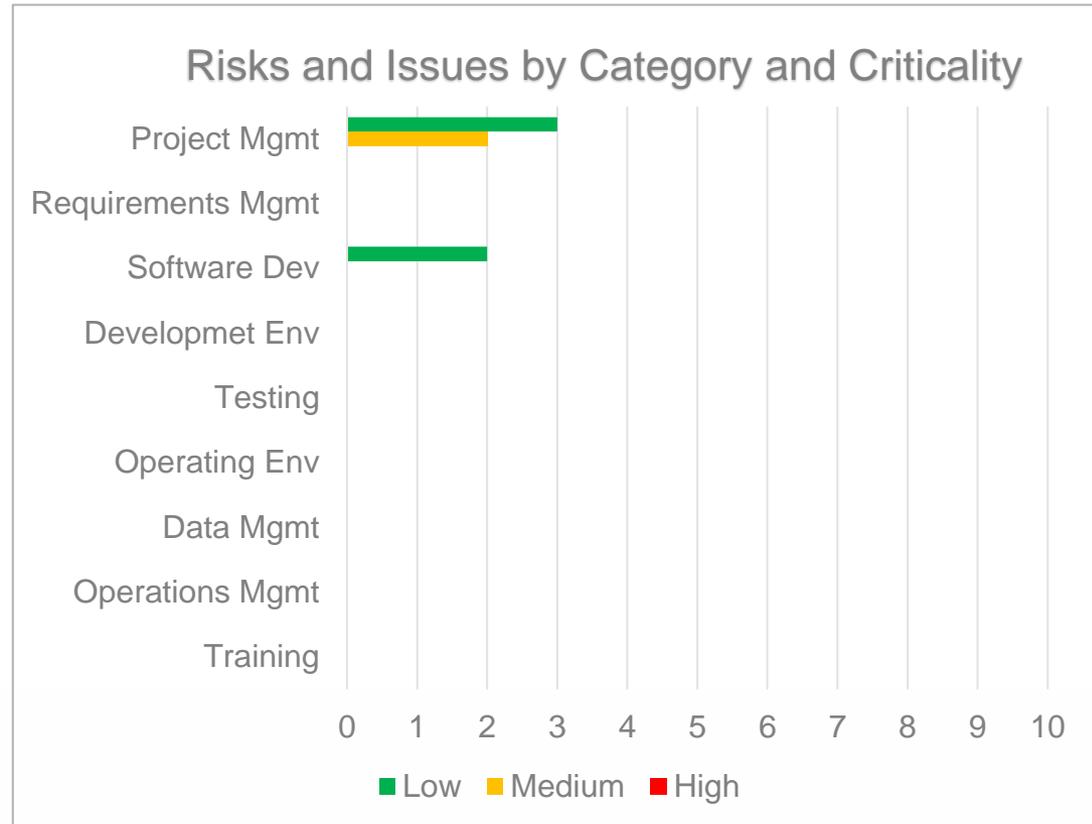
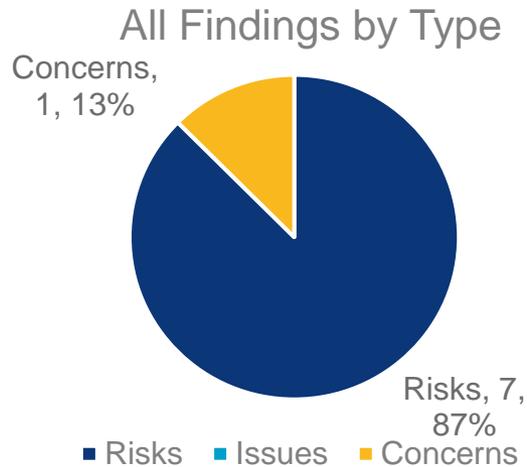
# Executive Summary

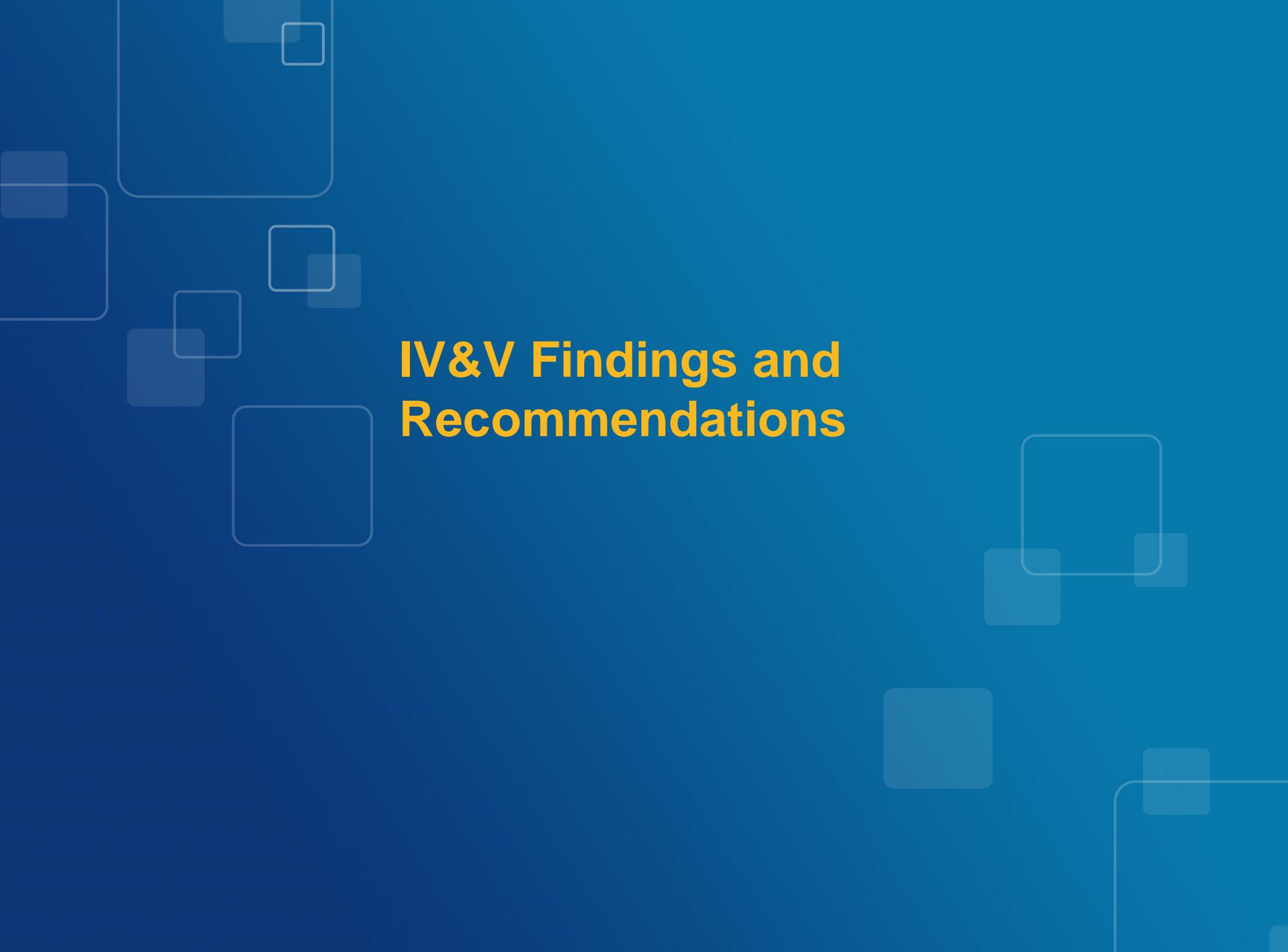
Nov '22	Category	IV&V Summary
L	Project Management	The Project does not anticipate challenges with staff availability during UAT. PUC staff are being asked to review the system to increase confidence that the system has been developed to PUC's expectations. If PUC is unable to complete this within the agreed upon time frame or if PUC requests further system refinements, the planned go-live of March 20, 2023, could be delayed.
M		The SI reported the execution phase is complete and all required user stories are developed. However, PUC has stated they have not seen enough of the system to feel confident the execution phase is complete. PUC remains concerned that if they wait for UAT to validate requirements that the volume of changes could be significant enough to create further delays and negatively impact buy-in and their users/SMEs confidence in the SI and their new system.
L		The Project continues to make progress with data cleansing. The PUC Technical Lead's limited capacity does not appear materially impacting these activities.
M		The Project aims to have the new card-not-present vendor begin early January 2023. PUC developed a short-list of qualified payment processing vendors, however, PUC reported that additional, unforeseen procurement challenges could create delays.
Nov '22	Category	IV&V Summary
L	Software Development	Limited PUC interaction with the system throughout the development phase made it difficult for PUC to determine if processes were improved overall. PUC plans to conduct a review of the system where SMEs walk through functionality early December to solicit feedback from users and validate requirements are being met so they can feel confident signing of on the development/execution phase.



# Executive Summary

IV&V is monitoring eight findings. There are seven risks and one preliminary concern. Two risks are medium and five risks are low. Five risks fall in the Project Management category and two are in the Software Development category.



The background is a solid blue color. It features several abstract geometric shapes, including squares and rectangles of various sizes and shades of blue. Some shapes are solid, while others are outlined in white. The shapes are scattered across the page, with a higher concentration on the left side. The text 'IV&V Findings and Recommendations' is centered in the middle of the page in a bold, yellow font.

# **IV&V Findings and Recommendations**

# IV&V Findings and Recommendations - Risks

IV&V ID #14	Type: Risk Rating: Low	Status: In progress	Category: Project Management Date Opened: September 30, 2021
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**Title:** Limited PUC resource availability could lead to schedule delays and incomplete system design.

**Observation:** Although the CDMS Project is a high priority at the PUC, resource limitations appear to exist throughout the life cycle of the Project. These constraints were communicated to the System Integrator (SI) early in the project for planning purposes.

**Context:** System development projects require coordination and engagement between the SI and the client in order to accurately document business needs, processes, user stories, business rules, and anything needed to build a system that meets the client's needs.

**Impact:** Schedule delays, increased project cost, implementation of a solution that that does not meet the PUC's needs

## Updates

11/30/2022: PUC SMEs and staff continue to be available for meetings and demos as needed. The Project does not anticipate challenges with staff availability during UAT. PUC understands this project is a high priority that has the support of project executives. However, unplanned activities requiring PUC staff involvement may be challenging to complete. For example, before agreeing that the Execution Phase of the Project is complete, PUC staff are being asked to review the system to increase confidence that the system has been developed as expected and their feedback has been incorporated into the system's design. If staff are unable to complete this timely, the SI's system testing may be delayed, impacting the currently anticipated March 20, 2023 go-live date which is during a busy time for PUC.



# IV&V Findings and Recommendations - Risks

IV&V ID #14 (cont.)	Type: Risk Rating: Low	Status: In progress	Category: Project Management Date Opened: September 30, 2021	
Recommendations/Action Items			Period	Status
The Project conduct detailed resource planning under the new schedule to avoid resource constraints.			Medium Term	New
PUC PM and SI PM develop a plan to address these constraint and work closely together throughout the project to plan important meetings based on resource availability.			Long Term	In progress
SI develop fully resourced work plan.			Short Term	Not started
PUC and SI review Sprint Plan and ceremonies to identify specific resources to help identify resource risk that can be addressed before sprint cycles begin.			Short Term	In progress
SI employ agile processes and methodologies so that progress can be made regardless of PUC resource availability.			Long Term	In progress



# IV&V Findings and Recommendations - Risks

IV&V ID #15	Type: Risk Rating: Low	Status: In progress	Category: Project Management Date Opened: September 30, 2021
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**Title:** Project deliverables and artifacts that lack sufficient detail could lead to project delays, misunderstandings, inefficient project execution, and rework.

**Observation:** Early SI submissions of project deliverables lacked sufficient detail.

**Context:** Project planning documentation such as the Project Plan, Risk Management Plan, Communication Plan and Change Management Plan, can be effective tools for projects of this size to increase stakeholder understanding of the goals, approach, steps, timelines, roles and responsibilities. Additionally, conceptual designs, requirements traceability matrices, and process maps can also provide important information for successfully developing a system that meets PUC's needs.

**Impact:** Failure to provide sufficient detail in project deliverables can lead to project team confusion, missteps, project delays, misunderstandings, inefficient project execution, and rework.

## Updates

11/30/2022: The SI submitted Deliverables 4.1, 4.2, 4.4, 4.5, 4.6 and 4.9 (Execution Phase Complete Deliverables). While the quality of deliverables has generally improved, requesting customer approval that the Execution Phase is complete at this time created an obstacle. There are discrepancies between the payment schedule and the DED triggers which are causing confusion as to when these deliverables can be approved. Also, it is difficult for PUC to agree if the Execution Phase is complete without seeing more of the system to feel confident user stories have been developed as expected. If these deliverables are not approved, the SI may elect to not move forward with the System Testing Phase of the project which could cause project delays.



# IV&V Findings and Recommendations - Risks

<b>IV&amp;V ID #15 (cont.)</b>	<b>Type: Risk</b>  <b>Rating: Low</b>	<b>Status: In progress</b>	<b>Category: Project Management</b>  <b>Date Opened: September 30, 2021</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
Although DEDs were developed for all deliverables, the SI should involve PUC before providing the draft deliverable to obtain feedback and expedite review cycles.			Long term	In progress
The SI should perform additional QA of deliverables prior to submission			Long term	In progress



# IV&V Preliminary Concerns

ID #16	Type: Risk	Status: In progress	Category: Project Management
	Rating: Medium		Date Opened: September 30, 2021

**Title:** Adoption of an aggressive schedule can lead to poor system design, PUC stakeholder frustration, and stretch PUC resources beyond their capacity.

**Observation:** The project has an aggressive schedule with little slack given the volume of deliverables and artifacts, the availability of PUC resources, and the perceived cadence of project meetings and workshops.

**Context:** A schedule with flexibility and sufficient slack to accommodate project changes that impact the schedule such as resource availability, activities that take longer than anticipated, or missed dependencies, typically result in a project that is delivered on time. Projects with aggressive schedules tend to rush project activities to meet deadlines.

**Impact:** Rushed project activities can reduce document and system quality. When activities do not seem thorough, customer frustration can result. A rushed schedule can place unnecessary demand on PUC resources, especially if PUC resources are already fully utilized.

## Updates

11/30/2022: The SI reported the Execution Phase is complete and all required user stories are developed. However, PUC has not seen enough of the system, either via SI-led demos, requirements review sessions, or on PUC staff's own time. Although the SI was unable to demo all of the user stories, the SI believes the demos adequately represented the entire system. Regardless, PUC is hesitant to agree the Execution Phase is completed satisfactorily. For example, PUC is unsure if their feedback collected during previous sprints and demos have been captured and implemented sufficiently. PUC and IV&V remain concerned the aggressive schedule did not provide enough time to review what was developed to determine if the execution phase is complete. If execution is not completed as scheduled, this may lead to additional project delays.



# IV&V Findings and Recommendations - Risks

<b>IV&amp;V ID #16 (cont.)</b>	<b>Type: Risk</b>  <b>Rating: Medium</b>	<b>Status: In progress</b>	<b>Category: Project Management</b>  <b>Date Opened: September 30, 2021</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
Provide reports that communicate progress clearly such as a burndown chart and sprint metrics such as planned user stories, completed user stories, cancelled user stories, and new/added user stories so as to clearly demonstrate if the project is on track or not.			Medium term	In progress



# IV&V Findings and Recommendations - Risks

IV&V ID #17	Type: Risk Rating: Low	Status: In progress	Category: Project Management Date Opened: September 30, 2021
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**Title:** Inefficient business analysis activities could lead to rework, schedule delays, SME frustration, and poor system design

**Observation:** PUC and IV&V were concerned that many analysis outputs lacked sufficient quality and comprehensiveness. For example 1) PUC workshop attendees mentioned various workshops and meetings were not very useful, unorganized and unproductive; 2) The workshop cadence seemed slow and did not appear to achieve all intended goals of each workshop session; 3) Although not a contractual requirement, meeting notes from the workshops were not sent to meeting attendees which helps confirm the SI's understanding and shows visibility that the SI understands PUC's needs; 4) Although not explicitly required, PUC requested the SI to review the business documentation provided by a 3rd party prior to conducting the as-is workshops to save time and not start from a blank slate. Despite having access to and reviewing the existing business documentation, PUC observed many questions and time spent on areas that were already documented and PUC was not confident as to how much of the existing documentation was leveraged.

**Context:** Efficient business analysis processes promote effective communications resulting in productive meetings, good project documentation that provides clarity to complex topics, and overall, foster trust.

**Impact:** Inefficient analysis activities can negatively impact the Project. For example, 1) Project delays can occur if meetings do not meet intended goals and require additional clarification; 2) Rework and redesign can happen if accurate information was not solicited because participant expectations were not clear during the meeting; 3) Client buy-in and system acceptance may reduce.

## Updates

11/30/2022: The SI continues to implement and demonstrate implemented user stories that are complete. However, PUC staff also continue to provide feedback and suggestions that may indicate the initial analysis of user stories may have been insufficient. For example, during the demo showing the list of documents and cases an external user subscribed to did not appear to contain enough case information for the user to know which case it is referencing. If too many user stories are implemented without sufficient analysis and feedback, this could lead to rework, schedule delays, SME frustration and poor system design.

# IV&V Findings and Recommendations - Risks

<b>IV&amp;V ID #17 (cont.)</b>	<b>Type: Risk</b>  <b>Rating: Low</b>	<b>Status: In progress</b>	<b>Category: Project Management</b>  <b>Date Opened: September 30, 2021</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
Institute continuous process improvement activities to refine the analysis processes and maximize their cadence without sacrificing quality.			Long term	In progress
Request the SI track their cadence/velocity to improve estimation of task durations to assure planned milestone due dates are realistic.			Long term	In progress



# IV&V Findings and Recommendations - Risks

IV&V ID #18	Type: Risk Rating: Low	Status: In progress	Category: Project Management Date Opened: October 28, 2021
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**Title:** Lack of attention to process improvement can lead to a system that simply automates existing processes instead of improving them

**Observation:** The extent to which the Project intends to focus on process improvements remains unclear. Pain points do not seem comprehensively tracked or considered during design sessions or whether all stakeholders are aware of or are actively utilizing the pain points list. While IV&V recognizes that change is difficult, some stakeholders appear to be hesitant to let go of familiar processes during the design sessions. It remains unclear if PUC has assigned the role of change champion to drive organizational process improvements.

**Context:** IT Projects that assign change champions and prioritize process improvement have an increased likelihood of resulting in systems that meet the organization's future business needs and improve system acceptance.

**Impact:** Lack of attention to process improvement can lead to a final product that fails to provide maximum value to users. Tracking pain points can be an effective OCM strategy to promote user adoption and increase user buy-in by providing visibility into how the system can resolve their pain points. Also, identifying and implementing opportunities for process improvement avoids SME frustration and rework.

## Updates

11/30/2022: The SI reported the execution phase is complete and all required user stories are developed. However, limited PUC interaction with the system throughout the development phase made it difficult for PUC to determine if processes were improved overall. PUC feedback during demos also indicate the extent of improved processes may not be satisfactory to PUC. PUC plans to conduct a review of the system early December to solicit feedback from users.



# IV&V Findings and Recommendations - Risks

<b>IV&amp;V ID #18 (cont.)</b>	<b>Type: Risk</b> <b>Rating: Low</b>	<b>Status: In progress</b>	<b>Category: Project Management</b> <b>Date Opened: October 28, 2021</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
Identify a PUC process improvement resource to drive/coordinate organizational process improvement efforts and assure system related processes are optimized. This resource could attend design sessions and validate designs support process improvement.			Short term	Not started
Work closely with the SI to identify opportunities for process improvement and implement associated features in the system being careful not to overwhelm users with too much change.			Long term	In progress
Formally engage stakeholders in identifying and tracking pain point and out-of-scope requirements so they are not forgotten and can be revisited in future project phases or other organizational initiatives.			Long term	In progress



# IV&V Findings and Recommendations - Risks

<b>ID</b> #19	<b>Type: Risk</b> <b>Rating: Low</b>	<b>Status: In progress</b>	<b>Category: Project Management</b> <b>Date Opened: November 30, 2021</b>
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**Title:** Key PUC project resources performing multiple roles could lead to schedule delays and significant project disruption.

**Observation:** IV&V has noted that at least two of the PUC project team members perform multiple roles and responsibilities on the project which may impact their ability to be successful if project demands increase.

In addition to serving as PUC's CDMS PM, this position also performs the following roles: Organizational Change Management lead, Process Improvement lead, Business Analyst Co-lead, User Acceptance Test (UAT) Co-lead, and Contract Administrator. In addition to performing ongoing operational responsibilities, the PUC CDMS Technical Lead is the Project IT Sponsor, Data SME, BA Co-Lead, and User Acceptance Test Co-Lead, and is heavily relied on for business analysis.

While these team members have indicated a strong commitment to project success, each has multiple competing priorities. The team members stated their support staff, including the new communications lead, will take on more responsibility to alleviate demands on their time. Also, the team members believe that the overall future workload will lessen.

It remains unclear if PUC staffing levels are appropriate for this project.

**Context:** Typically, Hybrid Agile projects require an increased level of customer engagement through all phases of the project. Overreliance on key resources can not only overtax and thereby reduce the effectiveness of these key individuals but also present a risk of significant project disruption in the event of their departure.

**Impact:** If the PUC PM and Technical SME are unable to transfer some responsibilities to other PUC resources, this could stretch them beyond their capacity which may lead to project delays and a decrease in quality in the project tasks they perform.

## Updates

11/30/2022: The new PM reported challenges meeting some deadlines as some activities require knowledge of the Project's history to complete. The new PM needs to spend additional time reviewing past decisions and discussions which takes time away from other duties. However, the new PM continues to prioritize responsibilities to meet project needs and does not foresee significant impact to the Project. The Technical SME also continues to meet most project expectations with some exceptions to data cleansing activities but also does not foresee significant impact to the Project.



# IV&V Findings and Recommendations - Risks

<b>IV&amp;V ID #19 (cont.)</b>	<b>Type: Risk</b>  <b>Rating: Low</b>	<b>Status: In progress</b>	<b>Category: Project Management</b>  <b>Date Opened: November 30, 2021</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
The Project should plan for different contingencies depending on when the third PM becomes available.			Medium term	Complete
The Project should plan for different contingencies depending on the role of the original PM moving forward.			Medium term	Complete



# IV&V Findings and Recommendations - Risks

IV&V ID #21	Type: Risk Rating: Medium	Status: New	Category: Project Management Date Opened: May 31, 2022
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**Title:** Delays in establishing card-not-present payment gateway could lead to schedule delays and increased cost

**Observation:** The Project elected to pause most activities for almost 3 months to procure a card-not-present payment processing vendor. Originally, the Project was planning on forego a public solicitation for these services, but the State Procurement Office required it. The SI stated the pause will be a no cost change order. .

**Context:** The Project has had past difficulties accurately estimating the procurement of the card-not-resent service vendor and it is unclear how accurate these new estimates are.

**Impact:** If the Project is unable to begin processing payments on August 14th, 2022, the Project may be further delayed. Given the SI will not charge the customer for the delay, the budget impact could be minimal. However, the SI stated if payment processing is not available by 8/14, there is a \$10,000 a week fee for schedule extension. If the vendor is not ready for transaction by 8/14, further delayed, \$10,000 a week. PUC stated they are confident they can complete this procurement before the 8/14 deadline but if the Project is unable to meet these deadlines, the Project stated they have alternative plans.

## Updates

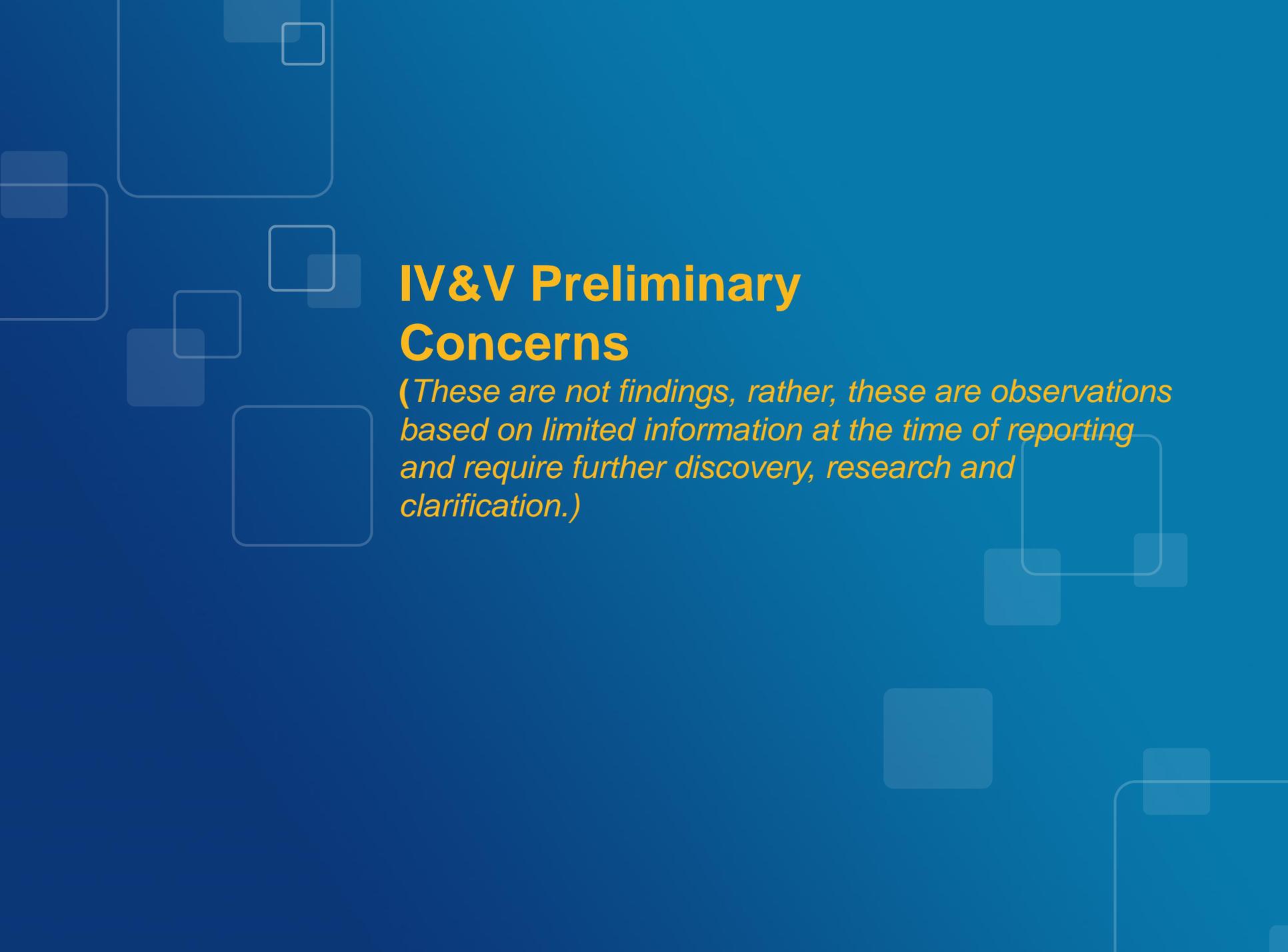
11/30/2022: The Project aims to have the new card-not-present vendor begin early January 2023. PUC developed a short-list of qualified payment processing vendors, however, PUC reported that additional, unforeseen procurement activities may create a delay. During the initial payment processing procurement effort, PUC paid a total of \$73,298.40, including tax, for the 7-week delay from 8/14/2022 to 10/3/2022.



# IV&V Findings and Recommendations - Risks

<b>IV&amp;V ID #21 (cont.)</b>	<b>Type: Risk</b> <b>Rating: Medium</b>	<b>Status: In progress</b>	<b>Category: Project Management</b> <b>Date Opened: May 31, 2022</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
Closely monitor procurement for any signs of delay			Medium term	In Progress
Develop mitigation strategies if procurement activities appear unfavorable			Medium term	In progress



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## **IV&V Preliminary Concerns**

*(These are not findings, rather, these are observations based on limited information at the time of reporting and require further discovery, research and clarification.)*

# IV&V Preliminary Concerns

<b>ID #20</b>	<b>Type: Preliminary Concern</b> <b>Rating: n/a</b>	<b>Status: New</b>	<b>Category: Data Management</b> <b>Date Opened: March 31, 2022</b>
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**Title:** Data cleansing challenges could overwhelm PUC SMEs and could confuse users, reduce user buy-in, and/or lead to schedule delays if the Project went live with some bad data

**Observation:** IV&V is concerned with the poor quality of the legacy system data and whether PUC has the capacity to effectively cleanse their data. Further, if the project aims to meet data conversion milestones, the project may elect to go-live with some bad data to meet their planned go-live date.

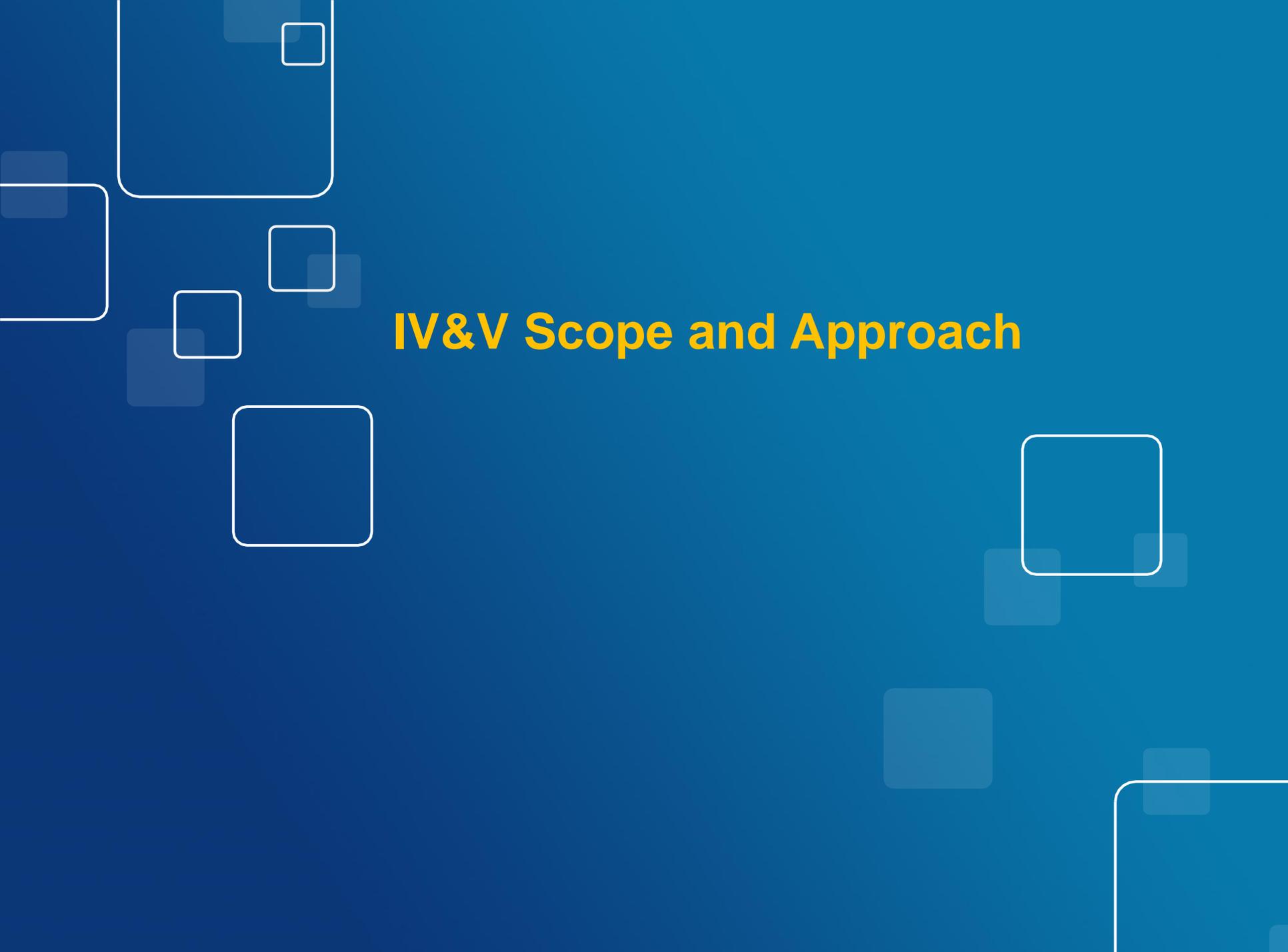
**Context:** Typically, any bad data is addressed prior to go live to facilitate user adoption and to increase perceived system quality.

**Impact:** If all important data is not cleaned up prior to go-live, user adoption may be challenged, and user perception of the system may be diminished.

## Updates

11/30/2022: The Project intends to test UAT with production data and aims to complete data conversion before UAT begins. Although the November 18, 2022 target date to complete data cleansing was missed, the Project reported there is still time to complete data cleansing activities before UAT.





# IV&V Scope and Approach

# IV&V Scope

- In accordance with PCG's contract for the CDMS Project at the PUC, the subject areas that are within the scope of IV&V activities include:
  - Project Management
  - Requirements Management
  - Software Development
  - Development Environment
  - System and Acceptance Testing
  - Operating Environment
  - Data Management
  - Operations Oversight
  - Training
- As the CDMS IV&V project progresses, PCG's activities will focus on areas that represent highest risk to the Hawaii PUC.

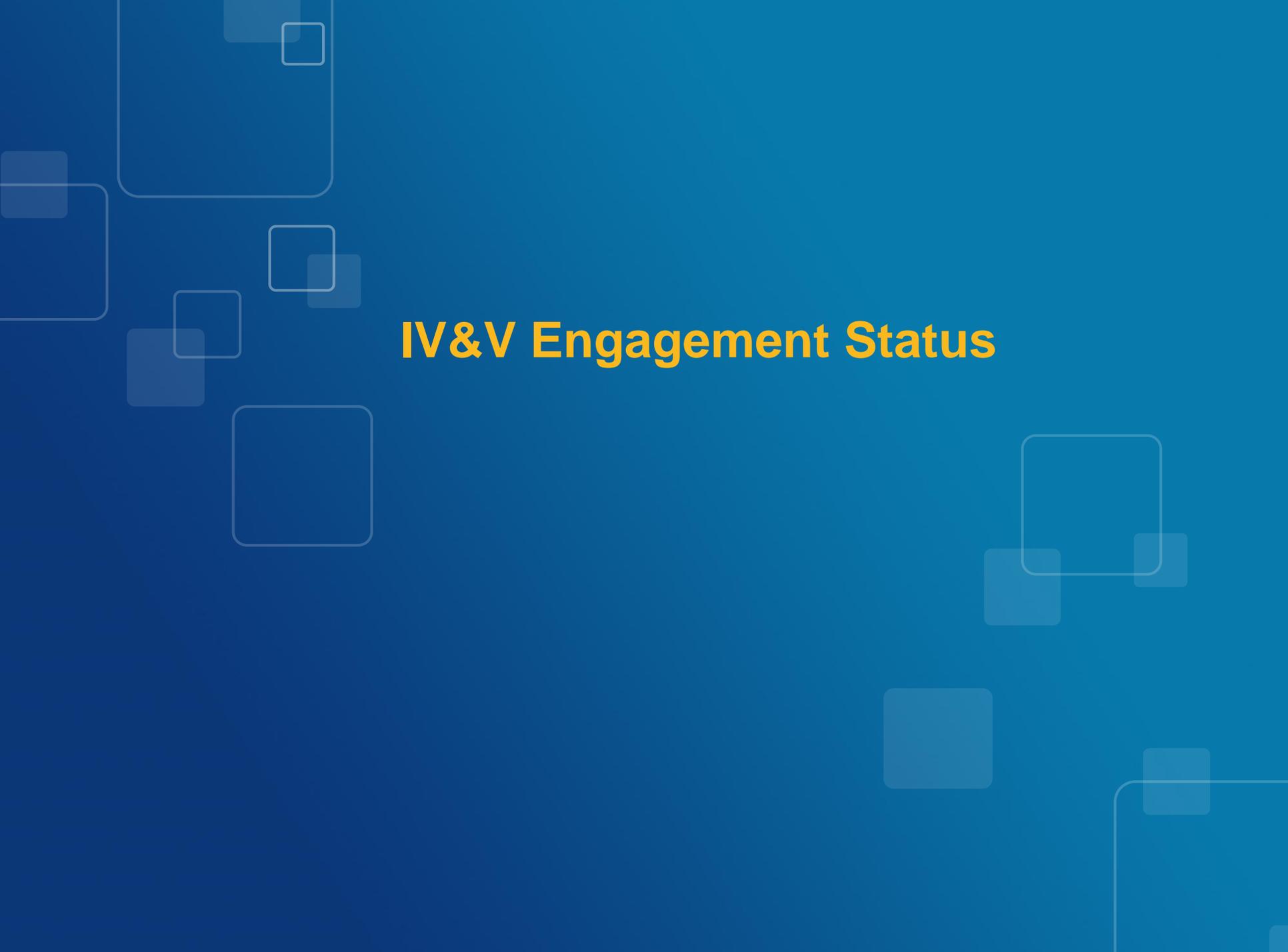


# IV&V Approach and Methodology

- What is Independent Verification and Validation (IV&V)?
  - Oversight by an independent third party that assesses the project against industry standards to provide an unbiased view to stakeholders
  - The goal of IV&V is to help the State get the solution they want based on requirements and have it built according to best practices
  - IV&V helps improve design visibility and traceability and identifies (potential) problems early
  - IV&V objectively identifies risks and communicates to project leadership for risk management
- PCG IV&V Methodology
  - Consists of a 4-part process made up of the following areas:
    1. **Discovery** – Discovery consists of reviewing documentation, work products and deliverables, interviewing project team members, and determining applicable standards, best practices and tools
    2. **Research and Analysis** – Research and analysis is conducted in order to form an objective opinion.
    3. **Clarification** – Clarification from project team members is sought to ensure agreement and concurrence of facts between the State, the Vendor, and PCG.
    4. **Delivery of Findings** – Findings, observations, and risk assessments are documented in this monthly report and the accompanying Findings and Recommendations log. These documents are then shared with project leadership on both the State and Vendor side for them to consider and take appropriate action on.

Note: This report is a point-in-time document with findings accurate as of the last day in the reporting period.





# IV&V Engagement Status

# IV&V Engagement Status

IV&V Engagement Area	Sep	Oct	Nov	Comments
IV&V Budget				The IV&V engagement is deliverables-based and PUC is not at risk of being over budget.
IV&V Schedule				The IV&V engagement aligns with the SI schedule.
IV&V Deliverables				There are no known risks to upcoming IV&V deliverables.
IV&V Staffing				The IV&V team maintains the proposed team and there are no foreseeable changes.
IV&V Scope				The IV&V project continues to operate within the scope of its engagement.

Engagement Status Legend		
 The engagement area is within acceptable parameters.	 The engagement area is somewhat outside acceptable parameters.	 The engagement area poses a significant risk to the IV&V project quality and requires immediate attention.

# Appendices



# Appendix A – IV&V Criticality Ratings

See definitions of Criticality Ratings below:

Criticality Rating	Definition
 H	A high rating is assigned if there is a possibility of substantial impact to product quality, scope, cost, or schedule. A major disruption is likely and the consequences would be unacceptable. A different approach is required. Mitigation strategies should be evaluated and acted upon immediately.
 M	A medium rating is assigned if there is a possibility of moderate impact to product quality, scope, cost, or schedule. Some disruption is likely and a different approach may be required. Mitigation strategies should be evaluated and implemented as soon as feasible.
 L	A low rating is assigned if there is a possibility of slight impact to product quality, scope, cost, or schedule. Minimal disruption is likely and some oversight is most likely needed to ensure that the risk remains low. Mitigation strategies should be considered for implementation when possible.

# Appendix B – IV&V Inputs

Meetings attended during the reporting period:	Artifacts reviewed during the reporting period:
Weekly check-ins with PUC	Deliverables 4.1, 4.2, 4.4, 4.5, 4.6 and 4.9 (Execution Phase Complete Deliverables)
Monthly check-ins with PP	
Weekly PM Meetings	
CDMS – Risk Management Meeting	
Deliverable Review Sessions	
Working Sessions	



# Appendix C – Upcoming IV&V Activities

Anticipated meetings to attend next period	Anticipated artifacts to review next period
Weekly check-ins with PUC	Test Plan / Test Artifacts
Monthly check-ins with PP	
Weekly PM Meetings	
CDMS – Risk Management Meeting	
Deliverable Review Sessions	
Sprint 10 Demo	
Feedback Demo	
PUC Validation Sessions	



# Appendix D – Recommendation Periods

Period	Definition
<b>Short Term</b>	These are recommendations that should be completed within the month and/or require less than a month to complete
<b>Medium Term</b>	These are recommendations that should be completed within 2-6 months and/or require 2-6 months to complete
<b>Long Term</b>	These are recommendations that should be completed within 6 months to a year and/or require > 6 months to complete.





**Solutions that Matter**